Title (en)

OPTICAL SENSOR ARRANGEMENTS

Publication

EP 0165697 B1 19881123 (EN)

Application

EP 85303292 A 19850509

Priority

US 61228484 A 19840521

Abstract (en)

[origin: EP0165697A1] An optical sensor arrangement comprises a light emitting diode (10) which is connected to a light detector (20) over a light connection such as a fibre optics fibre (15), the attenuation of the light connection depending on a variable to be measured. The fibre (15) may be provided in the vicinity of a vortex shedding flowmeter and is bent by the passage of vortices past the fibre. Bending the fibre (15) causes attenuation of the light signal from the light emitting diode (10) to the light detector (20). The light emitting diode (10) is powered by a pulse generator (U6 etc). which supplies the diode with low-duty cycle, high-current pulses. The resulting detected pulses are amplified, sampled and held (U1, U3) to obtain peak values for each pulse. The detected pulse is suppressed by a feedback circuit portion (U2b, U2c) which is activated only after each low duty cycle high current pulse. The detected peaks are utilised (U8c) to generate a square wave which is used as a measurement of the variable, in particular the passage of vortices in a vortex shedding flowmeter.

IPC 1-7

G01D 5/34; G01F 1/32

IPC 8 full level

G01D 5/26 (2006.01); **G01D 5/353** (2006.01); **G01F 1/32** (2006.01); **G01F 1/66** (2006.01); **G08C 13/00** (2006.01); **G08C 19/02** (2006.01)

CPC (source: EP KR US)

G01D 5/35345 (2013.01 - EP US); **G01F 1/325** (2022.01 - EP US); **G01F 1/66** (2013.01 - KR)

Cited by

EP0234680A1; DE19638912A1; CN109294901A; GB2238380A; EP0232007A3; DE4421075A1; US6483104B1

Designated contracting state (EPC)

DE FR GB IT SE

DOCDB simple family (publication)

EP 0165697 A1 19851227; **EP 0165697 B1 19881123**; AU 4257085 A 19861127; AU 572294 B2 19880505; BR 8501765 A 19860617; CA 1227356 A 19870929; DE 3566452 D1 19881229; ES 541172 A0 19860901; ES 8609702 A1 19860901; HK 77189 A 19891006; IN 162597 B 19880618; JP H0512760 B2 19930218; JP S60256014 A 19851217; KR 850008412 A 19851216; KR 900004882 B1 19900709; MX 162204 A 19910408; SG 46889 G 19891222; US 4628197 A 19861209

DOCDB simple family (application)

EP 85303292 A 19850509; AU 4257085 A 19850516; BR 8501765 A 19850410; CA 474958 A 19850222; DE 3566452 T 19850509; ES 541172 A 19850312; HK 77189 A 19890928; IN 196CA1985 A 19850315; JP 10622785 A 19850520; KR 850001364 A 19850305; MX 20525685 A 19850509; SG 46889 A 19890731; US 61228484 A 19840521